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I hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

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Linda M. Hykes

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE Technology Center 2600

Applicant : Lo, et al.

Application No. : 09/878,555

Filed : June 11, 2001

For : TURBO CHANNEL ESTIMATION FOR OFDM SYSTEMS

Docket No. : 101948040US

Date : October 27, 2001

Commissioner for Patents  
Washington, DC 20231

REVOCATION AND SUBSTITUTE POWER OF ATTORNEY

Sir:

In the matter of the above-identified application, I, Kathleen J. Buckley, declare that I am the Assistant Secretary of AT&T Wireless Services, Inc., the assignee of the entire interest. Documentary evidence of chain of title from the original owners to AT&T Wireless Services, Inc. has been filed with and recorded by the United States Patent Office at Reel 011907, Frame 0123. The evidentiary documents referred to in the instant Revocation and Substitute Power of Attorney have been reviewed by the undersigned, and it is certified that, to the best of Kathleen J. Buckley's knowledge and belief, title is in AT&T Wireless Services, Inc. I hereby revoke all powers of attorney heretofore given and appoint JERRY A. RIEDINGER, Registration No. 30,582; MAURICE J. PIRIO, Registration No. 33,273; MICHAEL D. BROADDUS, Registration

No. 41,637; CATHERINE HONG TRAN, Registration No. 43,960; ROBERT G. WOOLSTON, Registration No. 37,263; PAUL T. PARKER, Registration No. 38,264; JOHN M. WECHKIN, Registration No. 42,216; CHRISTOPHER DALEY-WATSON, Registration No. 34,807; STEVEN D. LAWRENZ, Registration No. 37,376; JAMES A.D. WHITE, Registration No. 43,985; EDWARD S. HOTCHKISS, Registration No. 33,904; JAMES NICKELSON, Registration No. 46,140; MARK A. THOMAS, Registration No. 37,953; BRETON A. BOCCIERI, Registration No. 31,739; BARBARA B. COURTNEY, Registration No. 42,442; PETER J. DEHLINGER, Registration No. 28,006; LEE ANN GORTHEY, Registration No. 37,337; RICHARD L. GREGORY, Registration No. 42,607; LINDA R. JUDGE, Registration No. 42,702; MICHAEL MARTENSEN, Registration No. 46,901; JUDY M. MOHR, Registration No. 38,563; and LARRY THROWER, Registration No. 47,994, all of Perkins Coie LLP, and KATHLEEN J. BUCKLEY, Registration No. 40,539, of AT&T Wireless Services, Inc., as the principal attorneys with full power of substitution, association, and revocation to prosecute said application, to transact all business in the Patent and Trademark Office connected therewith, and to receive the letters patent therefor. Please direct all correspondence to Customer Number 30083.

Bar Code:



30083

PATENT TRADEMARK OFFICE

AT&T Wireless Services, Inc.

10/29/2001  
Date

K. Buckley  
Kathleen J. Buckley  
Assistant Secretary

**ASSIGNMENT AND AGREEMENT**

For value received, each of the undersigned, Titus Lo of Redmond in the County of King County and State of Washington, and Ruifeng Wang of Redmond in the County of King County and State of Washington, hereby sells, assigns and transfers to AT&T Wireless Services, Inc., a corporation of the State of Delaware, having an office at 7277 164th Avenue NE, Redmond, Washington 98052, United States of America, and its successors, assignees and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to

**Turbo Channel Estimation For OFDM Systems**

described in an application for Letters Patent for the United States of America,

for which an application for a United States Patent was executed on \_\_\_\_\_

for which an application for a United States Patent was filed on \_\_\_\_\_ Application Number \_\_\_\_\_,

and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and the undersigned also concurrently hereby sell, assign and transfer to AT&T Wireless Services, Inc. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

The undersigned authorize AT&T Wireless Services, Inc. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from the undersigned, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

The undersigned hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of AT&T Wireless Services, Inc. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

The undersigned request that any and all patents for said inventions be issued to AT&T Wireless Services, Inc. in the United States and in all countries foreign to the United States, or to such nominees as AT&T Wireless Services, Inc. may designate.

The undersigned agree that, when requested, the undersigned shall, without charge to AT&T Wireless Services, Inc. but at its expense, sign all papers, and do all acts which may be

necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Attorney Docket Number: 2001-0084

Date: Apr. 25, 2001

Ruifeng Wang  
Ruifeng Wang

United States of America )

State of Washington ) ss.:

County of Kirkland )

I certify that I know or have satisfactory evidence that Ruifeng Wang is the person who appeared before me, and said person acknowledged that (he/she) signed this instrument and acknowledged it to be (his/her) free and voluntary act for the uses and purposes mentioned in the instrument.



Dated: 4/25/01

Riley Tarr  
Signature

Trademark: Patent Administrator  
Title

My appointment expires 3/27/04

AT&T CORP.  
P.O. Box 4110  
Middletown, New Jersey 07748-4110

Notary Public